REMARKS

This paper is responsive to the Office Action dated March 23, 2006. In the Office Action, Claims 1, 3-11 and 13-22 were rejected as being anticipated by Ellis (PCT Publication No. WO 00/04707). Applicants have amended Claims 1, 4-8, 11, 14-18, and 21-22. Claims 3 and 13 have been canceled without prejudice, and new Claims 23-24 have been added.

Applicants respectfully traverse the claim rejections set forth in the Office Action in view of the amendments presented herein. Ellis does not teach or suggest the subject matter recited in amended Claims 1, 4-11, and 14-22, nor does Ellis teach the subject matter recited in new Claims 23-24. Applicants request reconsideration and allowance of this application.

Before discussing in detail the reasons why applicants believe that Claims 1, 4-11, and 14-24 are allowable, applicants provide the following brief description of embodiments disclosed in the present application.

Summary of Disclosed Embodiments

The present application describes various embodiments of a user model that, in one embodiment, can be implemented in an interactive television system. An interactive television system may include a number of elements including a headend to which a plurality access devices (e.g., set top boxes or STBs) may be connected. A number of individuals may live in a house in which multiple access devices may be located. The access devices may be considered client systems.

In one aspect, the present application organizes an interactive television system into a hierarchy of logical software "objects" that represent the various households, access devices, and users in the households that make up the interactive television system. As depicted in FIGURE 5, a "household object" 202 may be associated with an account in the television system. The household object further contains "access device objects" and "user objects" that represent

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the access devices and users, respectively, in the household. See, e.g., page 18, lines 5-6 of the present application.

The use of "objects" is known in computer programming for organizing executable code and data, but has heretofore not been applied outside of computer programming. The present application presents a novel application of an object-oriented approach to organizing households, access devices, and users in an interactive multimedia environment.

Once established, an "object" can be instantiated in an electronic system and provide functionality to the electronic system. Multiple instances of an object can be set up to represent multiple entities. Thus, a household object can contain multiple access device objects and multiple user objects, wherein each instance of an object has a configuration of attributes and data. See, e.g., FIGURE 7, and in particular, for a user object, see FIGURE 8.

A user object may be may established to represent a user in the system, and the object, once established, may be instantiated in the multiple access devices in the household. The instances of the user object in the access devices all share a common origin and thus have the same organization of attributes and data. This aspect of the present application allows a user to create or reconfigure a user object by logging on to an authorized user object at any one of the access devices of the household. The other access devices (if any) in the household may automatically receive the new or reconfigured user object information without further action by the user.

In another aspect, when a user adds a new access device to a household, the new access device may automatically receive the user object information of user objects already existing in the household, without further action by the user. In one embodiment, this automatic exchange of user object information between instances of a user object may be coordinated by a server that stores the configuration information of each household and its associated user objects. This

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server, for example, can be operated by a multiple service operator (MSO) or service provider. Alternatively, the server may be at a broadcast center for a satellite broadcast system.

Patentability of Claims 1 and 4-10 Over Ellis

Ellis has been cited as anticipating the subject matter set forth in Claims 1 and 4-10. Applicants respectfully disagree. However, to advance the prosecution of the present application, applicants have amended the claims.

In particular, amended Claim 1 recites a system for viewing multimedia content that includes, in part, "a plurality of client systems coupled to the broadcast center, wherein the plurality of client systems is organized according to an object-oriented model in which logical software objects are instantiated in an object hierarchy." The object hierarchy includes "a household object that contains attributes and data related to a household in which the client systems are located" and "a plurality of user objects that contain attributes and data related to respective users of the client systems." Furthermore, the user objects "are contained in the household object and, when instantiated, the user objects define interaction of the respective users with the plurality of client systems."

Applicants submit that Ellis does not teach all the elements of Claim 1. At best, Ellis merely teaches that different television devices in a home may each have their own television program guide settings and that a local network in the home may enable users to communicate settings information from one television device to another television device.

Ellis explains as follows:

> The program guides may be linked using any suitable topologies and communication protocols. For example, the various pieces of user television equipment may be interconnected using a tree, bus, or ring topology. One piece of user television equipment may be designated as a

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primary device and other pieces of user television equipment may be designated as secondary devices. The primary and secondary devices may be connected in a star arrangement. A remote server may be used to implement certain program guide features and the pieces of user television equipment in the home may act as clients.

(See page 6, lines 6-17.)

FIG. 4a shows an illustrative tree configuration in which each piece of user television equipment is interconnected with another along a single path. . . . With the arrangement of FIG. 4a, each piece of user television equipment in home 65 may communicate with each other piece of user television equipment in home 65 over communication paths 70.

(See page 17, lines 9-12 and 27-31).

While Ellis depicts various user television equipment having communication paths to each other according to different network topologies, Ellis does not teach a system that includes, in part:

- "a plurality of client systems ... organized according to an object-oriented model in which logical software objects are instantiated in an object hierarchy"
- "a household object that contains attributes and data related to a household in which the client systems are located"
- "a plurality of user objects that contain attributes and data related to respective users of the client systems"
- "user objects are contained in the household object and, when instantiated, the user objects define interaction of the respective users with the plurality of client systems."

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These features, set forth in Claim 1, distinguish the claim over the prior art.

In support of the rejection of Claim 3, now cancelled, the Examiner further argued that "the claimed 'plurality of user objects associated with a plurality of client systems', is met by the disclosure in Ellis of the EPG that enables a parent to name and associate characteristics to each of the rooms in a household," citing pages 24-26 of Ellis. While this rejection is now moot, applicants wish to point out that this portion of Ellis teaches nothing about an object-oriented approach to organizing households and users in those households in an interactive television system. The Office Action incorrectly equates the plurality of user objects, as claimed in Claim 1, with Ellis' ability to name different user television equipment in a household. To be certain, applicants have studied the passages cited in the Office Action with respect to former Claim 3, and find nothing that even suggests a household object that contains a plurality of user objects as recited in Claim 1.

For at least the foregoing reasons, Claim 1 is not anticipated by Ellis and should be allowed.

In support of the rejection of Claim 4, the Examiner argued that Ellis' disclosure of a parent changing the settings of STBs in the household anticipates a "client system ... configured to be selectively accessed by a user to change a configuration of a user object ..., the system being configured to provide the change to all of the client systems of the plurality of client systems without further activity from the user." Applicants respectfully disagree. As acknowledged in applicants' prior response, the cited passages at pages 25-26 and other passages in Ellis disclose nothing that suggests an object-oriented model as claimed nor anything that discloses providing changes to a user object to all of the client systems without further activity from the user. To the contrary, Ellis specifically requires action from the user to indicate where system changes are to be applied. See, e.g., Figure 14 and the related discussion on page 26 of

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Ellis. See also Figures 18a and 18b of Ellis where the user must choose to "Apply to all", "Select locations", or "Apply to current location," to indicate how changes in settings should be applied.

In support of the rejection of Claim 5, the Office Action cited page 25, lines 6-30 as allegedly disclosing the claimed subject matter. While the Office Action asserts that Ellis teaches "that new user equipment maybe added to the system", this assertion is not commensurate with the scope of Claim 5. Claim 5 recites the system of Claim 1, wherein the system is "configurable to selectively add a new client system to the plurality of client systems, the system being configured to provide the plurality of user objects to the new client system without activity from a user." These features are not taught or suggested by Ellis. Thus Claim 5 should be allowed.

In support of the rejection of Claim 6, the Office Action alleged that a centralized ability to control a plurality of client systems as taught by Ellis anticipates the claim element "wherein a user object of the plurality of user objects can be concurrently active in more than one client system of the plurality of client systems." The cited passages at Ellis, page 24, lines 7-25, however, does not support the rejection of Claim 6. Additionally, as discussed above, Ellis teaches nothing about multiple user objects that can be instantiated in client systems. Claim 6 should be allowed.

In support of the rejection of Claim 7, the Office Action alleged that Ellis' disclosure of an "interactive EPG 173, for instance shown in Fig. 12, which can be accessed by all the users" anticipates the claim element "wherein the plurality of user objects includes an anonymous user object, wherein the anonymous user object is configured to be accessible to all users." Applicants respectfully disagree. The Office Action apparently equates a user object with a feature in which a user can remotely access an EPG over a networked system. Remote access of an EPG is not equivalent to establishing a user object that can be instantiated in various access

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devices, let alone an anonymous user object that can be accessed by all the users of the access devices. Claim 7 should be allowed.

As to Claim 8, applicants again note that Ellis teaches nothing about user objects as taught and claimed in the present application. Thus, Ellis cannot anticipate "a server operatively coupled to the plurality of client systems, wherein the server is configured to include information related to each user object of the plurality of user objects" as claimed, notwithstanding the cited disclosure in Ellis of a master device that can be used to adjust the controls and settings of other devices. Claim 8 should be allowed.

Claim 9 further recites "the server is configured to include a revision history, the revision history being configurable to include information related to configuration changes of the plurality of user objects." The Office Action alleged that this claim element is anticipated by Ellis, citing in particular pages 5 and 32, lines 1-10. Applicants have reviewed the cited passages and respectfully disagree. The notion of adjusting screen settings of each of the set top boxes, as discussed in the Office Action, suggests nothing about including a revision history that is configurable to include information related to configuration changes of a plurality of user objects. Claim 9 is patentable over Ellis.

In support of the rejection of Claim 10, the Office Action asserted that the claim element "wherein the revision history includes a ticket number associated with each configuration change that is included in the revision history" is taught by Ellis, at page 26, lines 25-30. Applicants respectfully disagree. The only relevant disclosure in Ellis appears to be the existence of a number that the program guide can be used to access settings from a remote location. There is nothing in Ellis to suggest that revisions to the program guide in Ellis are individually tracked. Moreover, as with Claim 9, there is nothing in Ellis that discloses a "revision history" as claimed.

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Patentability of Claims 11 and 14-20 Over Ellis

In support of the rejection of Claim 11, the Office Action relied upon the same arguments discussed above with respect to Claim 1. In particular, the Office Action alleged that Ellis' disclosure of a plurality of set top boxes coupled to a network anticipates the claimed plurality of access means, in combination with the other elements of Claim 11. Applicants respectfully disagree.

In particular, Ellis does not teach anything about a system for viewing multimedia content that includes, in combination:

- "distribution means for distributing multimedia content from a source"
- "a plurality of access means, communicatively coupled to the distribution means, for providing access to the multimedia content"
- "at least one household object representing a household to which the plurality of access means pertains, wherein the household object is a logical software object that includes attributes and data concerning the household"
- "a plurality of user objects representing users of the plurality of access means, wherein the user objects are logical software objects that include attributes and data concerning the users, and wherein the user objects are contained in the household object when the household object and the user objects are instantiated."

For the foregoing reasons, Claim 11 is not anticipated by Ellis and should be allowed.

In support of the rejections of Claims 14-20, the Office Action relied on the earlier discussion of Claims 4-10. Applicants have carefully reviewed Claims 14-20 and the arguments presented above with respect to Claims 4-10 and submit that Claims 14-20 are allowable over Ellis for the same reasons discussed above.

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Patentability of Claims 21-24 Over Ellis

As to Claim 21, the Office Action asserted that Ellis anticipates all of the elements of the claim. Applicants disagree. While Ellis teaches that a computer network may be used in the home and further depicts various user television equipment having communication paths to each other according to different network topologies, Ellis does not teach that the different devices are organized according to an object-oriented model that includes household objects and user objects contained in the household objects.

As discussed above relative to Claim 1, the user television equipment in Ellis are merely capable of communicating data to one another as needed. Simply because the user television equipment in Ellis is networked does not inherently teach or suggest the elements recited in Claim 21. In particular, Ellis does not teach a method that includes:

- "associating a plurality of client systems with a household"
- "instantiating at least one household object that represents the household, wherein the household object is a logical software object that includes attributes and data related to the household"
- "instantiating a plurality of user objects that represent users of the plurality of client systems, wherein the user objects are logical software objects that include attributes and data related to the users, and wherein the user objects are contained in the household object when the household object and the user objects are instantiated"
- "delivering content from a content source via a communication network to at least one of the plurality of clients systems in accordance with at least one of the user objects."

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An object-oriented approach to organizing households and users in an interactive television environment is truly novel and non-obvious in view of the prior art. For at least the foregoing reasons, Claim 21 is patentable over Ellis and should be allowed.

Claim 22 should also be allowed. Applicants have discussed above in detail how Ellis, at most, teaches networking of user television equipment in a home. Ellis does not teach anything about receiving a change of configuration of a user object from a user via a client system of the plurality of client systems, and providing the change to all of the client systems of the plurality of client systems without requiring further input from the user.

New Claims 23 and 24 have been added. Claim 23 recites the method of Claim 22, wherein the method further comprises "storing a revision history that includes information related to configuration changes of the plurality of user objects." Claim 24 recites the method of Claim 21, wherein the method further comprises "receiving information that a new client system has been added to the plurality of client systems of the household" and "providing the plurality of user objects to the new client system without requiring input from the user." Having carefully considered the prior art, applicants submit that Claims 23 and 24 are also in patentable condition.

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CONCLUSION

Amended Claims 1, 11, and 21 are clearly and patentably distinguished over the prior art. Claims 4-10, 14-20, and 22-24 are also patentable for their dependence on Claims 1, 11, and 21, and for the additional features they recite. Applicants respectfully request reconsideration and allowance of Claims 1, 4-11, and 14-24 at an early date.

Respectfully submitted,

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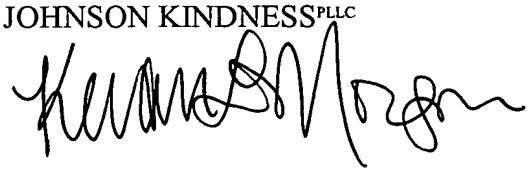

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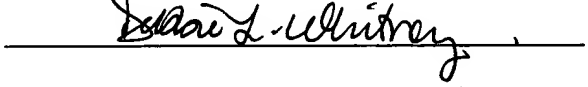
Date: June 23, 2005 

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